

PROGRAM 11 [UDP]

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1 BME & CS 147

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Pr/pune

```
//server
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#include <string.h>
#include <sys/types.h>
#include <sys/socket.h>
#define PORT 8080
#define MAXLINE 1024
#include <arpa/inet.h>
#include <netinet/in.h>
```

```
int main() {
    int sockfd, len;
    char buffer[MAXLINE], *hello = "Hello from server";
    struct sockaddr_in servaddr, cliaddr;

    if ((sockfd = socket(AF_INET, SOCK_DGRAM, 0)) < 0) {
        perror("socket creation failed"); exit(EXIT_FAILURE);
    }
    memset(&servaddr, 0, sizeof(servaddr));
    memset(&cliaddr, 0, sizeof(cliaddr));

    servaddr.sin_family = AF_INET;
    servaddr.sin_addr.s_addr = INADDR_ANY;
    servaddr.sin_port = htons(PORT);

    if (bind(sockfd, (const struct sockaddr *)&servaddr,
        sizeof(servaddr)) < 0) {
        perror("bind failed"); exit(EXIT_FAILURE);
    }

    len = sizeof(cliaddr);
    n = recvfrom(sockfd, (char *)buffer, MAXLINE, MSG_WAITALL,
```



```

    (struct sockaddr *)&cliaddr, &len);
    buffer[n] = '\0';
    printf("client: %s\n", buffer);
    sendto(sockfd, (const char *)hello, strlen(hello),
    MSG_CONFIRM, (const struct sockaddr *)&cliaddr, len);
    printf("Hello message sent\n");
    return 0;
}

```

// client

```

int main()
{
    int sockfd, n, len;
    char buffer[MAXLINE], *hello = "Hello from client";
    struct sockaddr_in servaddr;

```

```

    if ((sockfd = socket(AF_INET, SOCK_DGRAM, 0)) < 0) {
        perror("socket creation failed"); exit(EXIT_FAILURE);
    }

```

```

    memset(&servaddr, 0, sizeof(servaddr));

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    servaddr.sin_family = AF_INET;

```

```

    servaddr.sin_port = htons(PORT);

```

```

    servaddr.sin_addr.s_addr = INADDR_ANY;

```

```

    sendto(sockfd, (const char *)hello, strlen(hello), MSG_CONFIRM,

```

```

    (const struct sockaddr *)&servaddr, sizeof(servaddr));

```

```

    printf("Hello message sent\n");

```

```

    n = recvfrom(sockfd, (char *)buffer, MAXLINE, MSG_WAITALL,
    (struct sockaddr *)&servaddr, &len);

```

```

    buffer[n] = '\0';

```

```

    printf("server: %s\n", buffer);

```

```

    close(sockfd);

```

```

    return 0;
}

```